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SCIENCE

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CONTENTS

<i>Conservation and the Veterinarian:</i> DR. PIERRE A. FISH	323
<i>Quantity and Quality:</i> PROFESSOR G. A. MILLER	327
<i>Frederic Ward Putnam:</i> PROFESSOR FRANZ BOAS	330
<i>Paul Ehrlich</i>	332
<i>The New York Botanical Garden</i>	333
<i>Scientific Notes and News</i>	334
<i>University and Educational News</i>	339
<i>Discussion and Correspondence:—</i>	
<i>Mass as Quantity of Matter:</i> PROFESSOR L. M. HOSKINS. <i>Is Sivapithecus Pilgrim an Ancestor of Man?</i> DR. WILLIAM K. GREGORY. <i>Castle and Wright on Crossing-over in Rats:</i> DR. A. H. STURTEVANT	340
<i>Scientific Books:—</i>	
<i>A Monograph of the Existing Crinoids:</i> FRANK SPRINGER	342
<i>The National Academy of Sciences:</i> PROFESSOR EDWIN BIDWELL WILSON	345
<i>Special Articles:—</i>	
<i>Intracellular Digestion and Assimilation in Amphibian Embryos:</i> DR. GEORGE E. COGHILL. <i>Trains of Beating Light Waves:</i> PROFESSOR CARL BARUS	347
<i>Society of American Bacteriologists:</i> DR. A. PARKER HITCHENS	351

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CONSERVATION AND THE VETERINARIAN¹

As civilization advances and freer commerce develops with other nations, new conditions arise. New dangers menace our plant as well as our animal food supply. As farmers must now contend with the San José scale and other insect pests which formerly caused no concern but now threaten his fruit and other crops, so must the veterinarian realize that new dangers in the form of foreign diseases as rinderpest, foot and mouth disease, trypanosomes and possibly others may at any time invade our territory. Aside from the possibility of the danger of this foreign invasion, the diseases already established here in the form of glanders, anthrax, tuberculosis, abortion and sterility are sufficient cause for the most serious apprehension. The condition may soon arrive, if it has not already arrived, when, in certain sections, it will be difficult to maintain the normal size of the herds, letting alone the question of surplus stock for the market, because of the ravages of bovine diseases. If there is or should be difficulty in maintaining the size of the herds as they now are, the problem of rearing surplus animals is indeed a serious one.

The old order changeth. The day when the only desirable practise was in the city, and this was concerned principally with the horse, has gone by. While the automobile has undoubtedly affected city practise, it is no more likely to supplant the horse

¹ A portion of the president's address presented at the twenty-sixth annual meeting of the New York State Veterinary Medical Society, Ithaca, N. Y., August 3, 1915.

than did the trolley cars and bicycles. Aside from his use as a beast of burden, the horse will still be indispensable in safeguarding human lives by the production of serums and antitoxins. Within our own generation there was a time when the price of farm products sank almost to the vanishing point. In some of the northwestern states, it was reported, horses could not be given away and many were turned loose upon the plains and mountain-sides to gain what sustenance they could. This was not far from the period when the automobile first began to attract notice, and although the automobiles have shown a phenomenal increase in number, the census returns show, also, a marked increase in the number of horses and a still greater increase in their value. The demand for horses from this country in connection with the European war will serve to stimulate their production, and for a period after the war we may expect a further demand in order to restock the countries that are now being devastated. With his master the horse has taken an important part in war and the conquest of nations. Like his master he is subject to death and fearful injury. It is therefore no more than an act of justice that in the present war an organization known as the blue cross has been effected for the purpose of aiding wounded horses. Above all is humaneness. This quality needs cultivation in time of peace as well as war and veterinarians will do well to consider it not only in their own practise, but by showing a sympathetic interest and activity in local humane societies.

While the civilized world has shuddered at the horrors of the trenches of the European warfare, there has been a tragedy of the trenches in our own country which, although not seriously involving human life, has nevertheless caused great hard-

ship and paralyzed agricultural pursuits in certain localities.

The lives of thousands of our domesticated animals have been sacrificed, threatening more or less seriously our food and milk supply. This foreign invasion of an insidious infectious disease has necessitated the expenditure of a vast amount of money and has invoked the highest skill and strategy of the veterinary profession to exterminate an enemy so fatal to our resources.

Although the trenches have been filled and the green sod of the pasture marks the lasting resting-place of the many victims of the foot and mouth disease, there remains an aftermath of bitterness on the part of many stockmen and others who have suffered loss from the ravages of the disease and the restrictions imposed by the quarantine. This bitterness has been directed largely toward the Bureau of Animal Industry, because of delay in diagnosis and quarantine restrictions. The sentiment of hostility has been crystallized in a resolution adopted by the National Society of Record Associations representing thirty-four pure-bred-stock breeder's associations with a combined membership of 110,000 breeders of pure-bred live stock in the United States.

This resolution puts the association "on record as favoring and strenuously urging that the live-stock interests . . . be represented in an official capacity in the United States Department of Agriculture by an assistant Secretary of Agriculture who shall be a practical stockman, and not a scientist by profession, such officer to be the ranking officer in immediate charge of the live-stock interests and sanitary regulations administered by the Bureau of Animal Industry."

A second resolution "urges the adoption of state and national legislation providing

for just compensation at market value for all stock, pedigreed or otherwise, destroyed by state or nation, in the work of extirpating animal diseases; such compensation to be fixed by two appraisers, one appointed by the sanitary authorities and the other by the owner of the stock, etc."

The bitterness has apparently been intensified by the appraisals of the agents of the bureau, unsatisfactory to the owners of pure-bred and high-grade live stock. There are apparently two questions involved: one is the delay in diagnosis and quarantine, the other is the matter of the appraisal of prize cattle. Thus far only one side of the question has been heard and it would seem fitting that judgment of the bureau should be suspended until the report of the committee of investigation is available. Whatever the blame for the outbreak, there can be no serious criticism of the efforts of the veterinarians to eradicate it. All that was humanly possible was done to check its progress after the disease was determined, and it is only fair to render credit for what has been accomplished. We do not believe the veterinarians should be deposed as administrators of sanitary affairs. We do not believe a stockman, "not a scientist," no matter how high his business qualifications, could have rendered more efficient service in cleaning up the outbreak than have the veterinarians.

Sanitary administration is one thing; appraisal is another. Appraising does not come in the veterinary curriculum. We believe the two should not be confused. The second resolution of the National Records Association is an admission that the remedy for this cause of bitterness is legislation by the states and nation and in this remedy the stockman may expect the hearty cooperation of the veterinarian. It is gratifying at this time to say that New York state is the first to enact legislation of

this character. Because appraisals are not satisfactory is no reason why veterinarians should be displaced in the administration of sanitary affairs. The remedy is in legislation.

Lamentable as this experience with foot and mouth disease has been, it points the way clearly, among other things, to the fact that a technical veterinary education should be built upon something more than a grammar-school foundation. Something more than the general education of a child of thirteen or fourteen years should form the basis of a preparation for technical studies which are to fit him to stand as a bulwark of protection between insidious diseases, on the one hand, and the health of millions of dollars' worth of live stock, on the other.

Some years ago a former Secretary of Agriculture, with the idea of improving the service of the United States Veterinary Inspectors, through a committee of veterinarians, formulated certain changes in the curricula of the veterinary schools. The recommendations of the committee were converted into regulations by the Secretary of Agriculture and the United States Civil Service Commission. Although it was stated that there was no desire to control the schools, but merely to make known the requirements of the government for graduates who planned to enter the service of the Bureau of Animal Industry as veterinary inspectors, the effect was much the same as control, as apparently none of the institutions were desirous of being omitted from the list of eligible schools as published by the department. We have always felt that the secretary erred in regarding the curriculum as more important than the man.

To improve conditions it would seem logical that the effort should begin at the foundation and that it should be unneces-

sary for outbreaks of animal diseases involving millions of dollars of property to force home to us the fundamental knowledge that it is the quality of the man that counts.

One basic step toward the prevention of a repetition of serious outbreaks in the future is the requirement of at least a high-school rather than a grammar-school foundation for a proper veterinary education. The National Society of Record Associations, representing 110,000 breeders of pure-bred live stock, and the Secretary of Agriculture may do well to consider seriously an agitation for and an insistence upon a better fundamental education for those who are to enter veterinary work. The veterinary can not take its place with other learned professions until it conforms to the same standard of requirements. The fault has been with the system. The weak link in the educational chain has been the low entrance requirements. With this link strengthened, with a strong foundation upon which to build the veterinary curriculum, there is hope for the future.

A further safeguard against outbreaks of infectious diseases is the establishment of a system of district veterinarians on a plan similar to that in use in some foreign countries. If county agents are of benefit in the progress of agriculture, if the twenty health supervisors of the state are of service in the physical uplift of the population by preventing and restricting human diseases, then it is equally important in the conservation of our resources that there should be district veterinarians. The duty of a district veterinarian should be to keep a close supervision over all transactions involving the possible introduction and spread of infectious diseases of animals as well as other matters pertaining to them. He should also have supervision over a state meat inspection service. Bovine tuberculosis alone,

the control of which is estimated to cost the state about \$3,000,000 annually, would warrant the services of a skilled veterinarian in each district. Such an arrangement is not an experiment; its efficiency has already been demonstrated in other countries.

As pointed out by Dr. Moore,² the wide distribution of foot and mouth disease has illustrated in a striking manner the necessity of having a competent veterinarian in each district to guard against such infections. Had there been a *competent district veterinarian* in the county where foot and mouth disease first appeared last August, it is highly probable that its spread would have been checked before its virus had been so widely disseminated. If by this extra precautionary measure one per cent. of the loss from such diseases could be prevented, the amount it would save the state would many times overpay the expense of such service. A bill embodying the features just enumerated was before the legislature at its last session, but, unfortunately, failed to become a law.

In no other profession, perhaps, are there as many temptations in the way of commercialism as in the veterinary profession. The desire to win and retain the good will of certain clients, who may themselves be dishonest and are willing to pay for dishonest tests and falsified records, may serve as a pitfall for a weak veterinarian. Opportunities are not wanting in the case of glandered horses, tubercular cattle, certified milk and other instances for veterinarians intentionally or through carelessness, indifference or criminal negligence to inflict great damage upon the public and bring their own profession into disrepute. Human life may pay the toll of this negligence. Falsified records and incompetent tests may brand the person making them as

² *Cornell Veterinarian*, April, 1915.

an unconscious murderer of little children. Greater criminality than this can no man possess: that he jeopardize the lives of his kind for the sake of money. In no profession is there greater need for self-control and the exercise of the strictest honesty and personal integrity.

The conservation of our domesticated animals and their products is of the highest importance to the welfare of our nation. The following figures are taken from the census of 1910. They are the latest *official* figures available, although probably inaccurate at the present time. During the last five years there has probably been an increase in the number of veterinarians. In this period, also, there has probably been a decrease in the number of some of the domesticated animals because of the ravages of foot and mouth disease and established diseases as well as a decline, more or less fluctuating, in production.

The figures show that in 1910 there were in this country on farms and not on farms 206,646,069 domesticated animals, including cattle, horses, mules, asses, burros, swine, sheep, and goats, with a valuation of \$5,296,421,619. With 11,652 veterinarians in this country, we have a ratio of one veterinarian to 17,734 animals, or in financial terms one veterinarian to \$454,550 of animal valuation. While this average is higher in some parts and much less in others, it serves to emphasize the fact that a great responsibility rests upon the veterinarian if he is to assist, not merely in the conservation of much valuable animal stock already in existence, but in promoting a still greater production. The necessity for this is obvious in the case of the animals used for food. The census returns show a decrease of 8.7 per cent. in the number of cattle on farms with an increase of 1.6 per cent. in their valuation; a decrease of 7.4 per cent. in swine with an increase of 72.1

per cent. in their valuation, and a decrease of 14.7 per cent. in sheep with an increase of 36.8 per cent. in their valuation. Horses, mules, asses and burros have increased in number during this period and their valuation shows a much higher percentage of increase than in the case of the food animals.

It has been figured that our average disease loss of live stock in the United States is \$150,000,000 and our exposure loss \$44,000,000, a total of nearly \$200,000,000 annually. It is evident that few industries could endure such proportionate losses and survive. The largest toll has been taken from the food-producing animals. We may assume that practically all losses from exposure are preventable and that this item will diminish as the open-range boundaries contract and better provision is made for the winter sustenance of stock.

The checking of the disease loss is a slower and more serious matter and it is here that the services of the veterinarian are necessary. To meet this obligation he must be something more than an uneducated, practical horse doctor more or less successful in the treatment of spavins, ring-bones, colics and other routine cases of practise. He must be able to see beyond the educational horizon which treats only of routine practise and, with a proper blending of scientific and practical training, show an appreciation not only of personal but community interest in the animal resources of our country.

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QUANTITY AND QUALITY

PROFESSOR ÉMIL BOREL, who visited America in 1912 as one of the inaugural lecturers at the opening of the Rice Institute of Houston, Texas, recently embodied some of his impressions about America in an article under the